

What is claimed is:

1. A lubricant composition comprising a major amount of baseoil lubricant and a minor amount of lubricant additive, the lubricant additive comprising (a) a dispersant containing at least one member selected from the group consisting of hydrocarbyl-substituted succinimides, hydrocarbyl-substituted amines, and Mannich base adducts derived from a hydrocarbyl-substituted phenol condensed with an aldehyde and an amine, and (b) a viscosity index improver comprising a substantially linear block copolymer having a number average molecular weight as determined by gel permeation chromatography ranging from about 50,000 to about 250,000, the block copolymer being derived from a conjugated diene monomer containing no less than 5 carbon atoms and a monoalkenylarene monomer, wherein the block copolymer has an aromatic content ranging from about 10 wt.% to about 50 wt.% and an olefinic unsaturation ranging from about 0.5 wt.% to about 5 wt.%.
  2. The lubricant composition of claim 1 wherein the conjugated diene monomer comprises isoprene.
  3. The lubricant composition of claim 1 wherein the monoalkenylarene monomer comprises styrene.
  4. The lubricant composition of claim 1 wherein the hydrocarbyl substituent is comprised of a polymerization product of a raffinate I stream and isobutylene having a number average molecular weight ranging from about 800 to about 1200 as determined by gel permeation chromatography and more than about 70 mol percent of the polymerization product having a terminal vinylidene group.
  5. The lubricant composition of claim 4, wherein the polymerization product of the hydrocarbyl substituent is derived from a reaction mixture including from about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.
  6. The lubricant composition of claim 1 comprising a hydrocarbyl-substituted succinimide derived from the polymerization product and succinic acid having a ratio

of polymerization product to succinic acid ranging from about 1.0:1.0 to about 1.0:1.6.

7. The lubricant composition of claim 1 comprising a Mannich adduct derived  
5 from hydrocarbyl-substituted phenols, an aldehydes and a polyethylene polyamine.

8. The lubricant composition of claim 1 wherein the composition comprises  
from about 1 to about 10 percent by weight polymeric dispersant and from about 5 to  
about 35 percent by weight viscosity index improver based on the total weight of the  
10 lubricant composition.

9. The lubricant composition of claim 1 wherein the baseoil lubricant is  
selected from the group consisting of mineral lubricating oils, natural base oils,  
synthetic lubricants, and unrefined, refined and re-refined oils.

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10. The lubricant composition of claim 1 wherein the viscosity index  
improver comprises a non-shear stable viscosity index improver.

11. A lubricant additive comprising:  
20 a dispersant component comprising:

(a) a first dispersant including at least one member selected from the  
group consisting of hydrocarbyl-substituted succinimides,  
hydrocarbyl-substituted amines, and Mannich base adducts derived  
from hydrocarbyl-substituted phenols condensed with aldehydes and  
25 amines; and

(b) a second dispersant including a member selected from the group  
hydrocarbyl-substituted succinimides, hydrocarbyl-substituted amines,  
and Mannich base adducts derived from hydrocarbyl-substituted  
phenols condensed with aldehydes and amines,

30 wherein the hydrocarbyl substituent of the first dispersant has a  
number average molecular weight ranging from about 1500 to about  
2500 as determined by gel permeation chromatography and wherein  
the second dispersant has a number average molecular weight ranging

from about 800 to about 1200 as determined by gel permeation chromatography; and

a viscosity index improver component comprising a substantially linear block copolymer having a number average molecular weight as determined  
5 by gel permeation chromatography ranging from about 50,000 to about 250,000, the block copolymer having an A block derived from a monoalkenylarene monomer and a B block derived from a conjugated diene monomer containing no less than 5 carbon atoms and, wherein the block copolymer has an aromatic content ranging from about 10  
10 wt.% to about 50 wt.% and an olefinic unsaturation ranging from about 0.5 wt.% to about 5 wt.%.

12. The lubricant additive of claim 11, wherein the hydrocarbyl-substituent of at least one of the first and second dispersants comprises a polymerization product  
15 derived from a reaction mixture including from about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.

13. The lubricant additive of claim 11, wherein at least one of the first and second dispersants comprises a hydrocarbyl-substituted succinic acid derivative.

14. The lubricant additive of claim 13, wherein the hydrocarbyl-substituent comprises a polymerization product derived from a reaction mixture including from about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight  
20 percent raffinate I stream.

15. The lubricant additive of claim 13, wherein the first dispersant is a post treated dispersant.

16. The lubricant additive of claim 11, wherein at least one of the first and  
30 second dispersants comprises a Mannich base adduct derived from a hydrocarbyl-substituted phenol condensed with an aldehyde and an amine.

17. The lubricant additive of claim 16, wherein the hydrocarbyl-substituent comprises a polymerization product derived from a reaction mixture including from

about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.

18. The lubricant additive of claim 11 wherein the B block is derived from an  
5 isoprene monomer.

19. The lubricant additive of claim 11 wherein the A block is derived from a styrene monomer.

10 20. A method of reducing wear in moving parts, comprising contacting the moving parts with a lubricant composition comprising a major amount of baseoil and a minor viscosity index improving amount of a non-shear stable viscosity index improver comprising a substantially linear block copolymer having a number average molecular weight as determined by gel permeation chromatography ranging from  
15 about 50,000 to about 250,000, the block copolymer being derived from a conjugated diene monomer containing no less than 5 carbon atoms and a monoalkenylarene monomer, wherein the block copolymer has an aromatic content ranging from about 10 wt.% to about 50 wt.%, an olefinic unsaturation ranging from about 0.5 wt.% to about 5 wt.%.

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21. The method of claim 20 wherein the conjugated diene monomer comprises isoprene.

22. The method of claim 20 wherein the monoalkenylarene monomer  
25 comprises styrene.

23. The method of claim 20 wherein the moving parts comprise moving parts of a gasoline or diesel internal combustion engine.

30 24. The method of claim 20 wherein the moving parts comprise a vehicle transmission.

25. The method of claim 23 wherein the lubricant composition includes:

a first dispersant including at least one member selected from the group consisting of hydrocarbyl-substituted succinimides, hydrocarbyl-substituted amines, and Mannich base adducts derived from hydrocarbyl-substituted phenols condensed with aldehydes and amines; and

a second dispersant including a member selected from the group hydrocarbyl-substituted succinimides, hydrocarbyl-substituted amines, and Mannich base adducts derived from hydrocarbyl-substituted phenols condensed with aldehydes and amines,

wherein the hydrocarbyl substituent of the first dispersant has a number average molecular weight ranging from about 1500 to about 2500 as determined by gel permeation chromatography and wherein the second dispersant has a number average molecular weight ranging from about 800 to about 1200 as determined by gel permeation chromatography.

26. The method of claim 25 wherein the lubricant composition is a crankcase oil present in the crankcase of the engine.

27. The method of claim 25, wherein the hydrocarbyl-substituent of at least one of the first and second dispersants comprises a polymerization product derived from a reaction mixture including from about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.

28. The method of claim 25, wherein at least one of the first and second dispersants comprises a hydrocarbyl-substituted succinic acid derivative.

29. The method of claim 28, wherein the hydrocarbyl-substituent comprises a polymerization product derived from a reaction mixture including from about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.

30. The method of claim 28, wherein the first dispersant is a post treated dispersant.

31. The method of claim 25, wherein at least one of the first and second dispersants comprises a Mannich base adduct derived from a hydrocarbyl-substituted phenol condensed with an aldehyde and an amine.

5           32. The method of claim 31, wherein the hydrocarbyl-substituent comprises a polymerization product derived from a reaction mixture including from about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.

10           33. A method for lubricating moving parts of a vehicle comprising contacting at least one of the moving parts with a lubricant composition containing a mineral oil base stock and a lubricant additive, the lubricant additive comprising:

          a first dispersant including at least one member selected from the group consisting of hydrocarbyl-substituted succinimides, hydrocarbyl-substituted amines,  
15           and Mannich base adducts derived from a hydrocarbyl-substituted phenol condensed with an aldehyde and an amine;

          a second dispersant including a member selected from the group hydrocarbyl-substituted succinimides, hydrocarbyl-substituted amines, and Mannich base adducts derived from a hydrocarbyl-substituted phenol condensed with an aldehyde and an  
20           amine,

          wherein the hydrocarbyl substituent of the first dispersant has a number average molecular weight ranging from about 1500 to about 2500 as determined by gel permeation chromatography and wherein the second dispersant has a number average molecular weight ranging from about 800 to about 1200 as determined by gel  
25           permeation chromatography, and wherein the lubricant additive is present in the lubricant composition in an amount sufficient to enhance the dispersability of particles in the lubricant composition; and

          a viscosity index improver comprising a substantially linear block copolymer having a number average molecular weight as determined by gel permeation  
30           chromatography ranging from about 50,000 to about 250,000, the block copolymer being derived from a conjugated diene monomer containing no less than 5 carbon atoms and a monoalkenylarene monomer, wherein the block copolymer has an aromatic content ranging from about 10 wt.% to about 50 wt.%, an olefinic unsaturation ranging from about 0.5 wt.% to about 5 wt.%.

34. The method of claim 33 wherein the conjugated diene monomer comprises isoprene.

5           35. The method of claim 33 wherein the monoalkenylarene monomer comprises styrene.

36. The method of claim 33, wherein the hydrocarbyl-substituent of at least one of the first and second dispersants comprises a polymerization product derived  
10 from a reaction mixture including from about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.

37. The method of claim 33, wherein at least one of the first and second dispersants comprises a hydrocarbyl-substituted succinic acid derivative.

15           38. The method of claim 37, wherein the hydrocarbyl-substituent comprises a polymerization product derived from a reaction mixture including from about 35 to about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.

20           39. The method of claim 37, wherein the first dispersant is a post treated dispersant.

40. The method of claim 33, wherein at least one of the first and second  
25 dispersants comprises a Mannich base adduct derived from a hydrocarbyl-substituted phenol condensed with an aldehyde and an amine.

41. The method of claim 40, wherein the hydrocarbyl-substituent comprises a polymerization product derived from a reaction mixture including from about 35 to  
30 about 45 weight percent isobutylene and from about 55 to about 65 weight percent raffinate I stream.

42. The method of claim 33 wherein the moving parts of the vehicle comprise the crankcase of an internal combustion engine.

43. The method of claim 33 wherein the moving parts of the vehicle comprise a drive train of the vehicle.

- 5           44. The method of claim 43 wherein the lubricant composition comprises an automatic transmission fluid.